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Sperm Counts Plummeting Dramatically — and Faster Than Previously Thought

The authors of a new analysis found that sperm count globally dropped by more than half between 1973 and 2018, and that the decline is accelerating.

By Environmental Health News

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By Grace van Deelen

For years, scientists across the world have gathered evidence showing declines in sperm quality. Now, new research compiling the results of those studies has found that sperm count has dropped dramatically around the world, and the rate of decline is accelerating.

In a new analysis, researchers at Mount Sinai Medical Center, the University of Copenhagen, and the Hebrew University of Jerusalem, among others, found that sperm count globally dropped by more than half between 1973 and 2018, and that the decline is accelerating: Since 1972, sperm count has dropped by about 1% each year. Since 2000, the annual decrease has been, on average, more than 2.6%.

The findings raise concerns that an increasing number of people will need assistance to reproduce, as well as concerns about the overall health of human society, since low sperm count is linked to higher rates of some diseases.

And while scientists are still trying to tease out the reasons for the drop, chemical exposures, especially to pesticides, are a likely factor — and climate change may even play a role.

Researchers are calling for urgent action to bolster more research into sperm count, determine the causes of the decline, and prevent further deterioration of male reproductive health.

"We have clear evidence that there is a crisis in male reproduction," Hagai Levine, lead author on the study and an epidemiologist at the Hebrew University of Jerusalem, told EHN.

An "alarming" decline

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OF WIDESPREA
SPERM DECLINE
with Dr. Shanna Swan
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The study builds on the team's previous research, which showed a decline in sperm count in North America, Europe, Australia and parts of Asia of 28.5% between 1973 and 2011.

Adding data from 38 studies to the new analysis has made the case for sperm decline stronger, Shanna Swan, an author on the paper and a leading reproductive epidemiologist at Mount Sinai, told EHN.

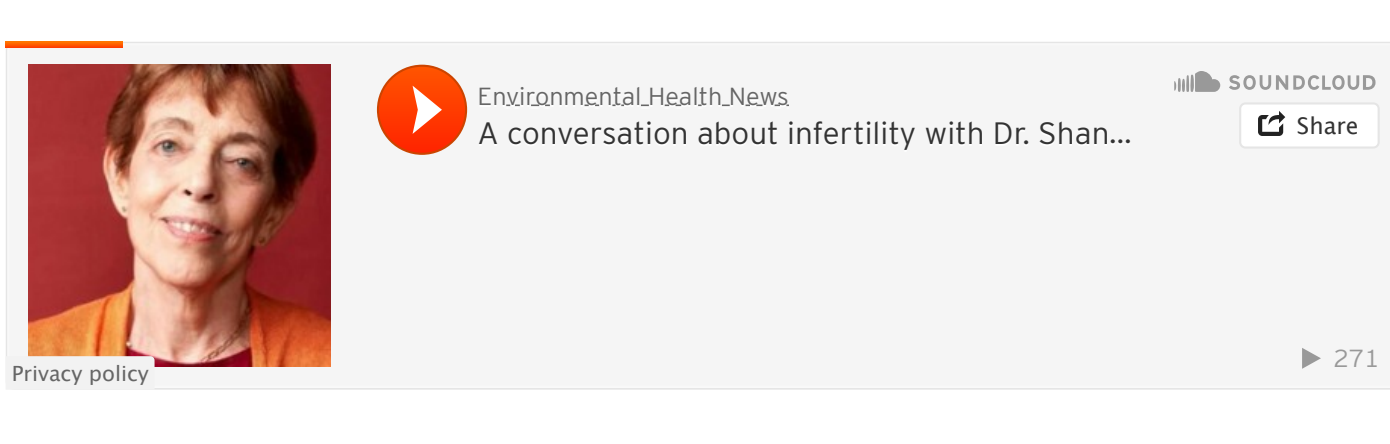
"It's really alarming," said Swan, who is also an adjunct scientist with Environmental Health Sciences, which publishes EHN.org.

Swan authored the book Count Down: How Our Modern World Is Threatening Sperm Counts, Altering Male and Female Reproductive Development, and Imperiling the Future of the Human Race.

The research found that the average global sperm count in 2018 was 49 million per milliliter of semen. When a man's sperm count drops below about 45 million per milliliter, his ability to cause a pregnancy starts dropping dramatically, said Swan.

She said the results could mean that in the coming decades, large swaths of the global population of men could be subfertile or infertile, or could require assisted reproduction techniques, like in vitro fertilization, or IVF, hormone treatment, or a technique called intracytoplasmic sperm injection, in which sperm are directly injected into an egg.

In addition to the drop in average sperm count, Levine said it was surprising that the rate of decline was accelerating, rather than slowing down. "Is there a tipping point, that once you cross, you get an even worse situation?" he said. "That's something to really pay attention to."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Overall, said Levine, the results indicate that "something is very wrong with our global modern environment."

Sperm count is not only a reproductive concern, but an indicator for other health problems in men, and is used as a predictor for male longevity.

Men with poor sperm count tend to have higher rates of cardiovascular disease, certain cancers and even death, Michael Eisenberg, a professor of urology at Stanford University who was not involved in the research, told EHN. "This decline in sperm count could also suggest other health concerns," he said.

A 2016 study authored by Eisenberg found that diabetes and other diseases were associated with lower reproductive health. However, said Eisenberg, the reason why overall health is linked to sperm quality is still unknown.

Eisenberg said the new study on sperm count decline is a "powerful addition" to previous evidence that sperm count across the globe has declined.

Reasons for the trend

Though the reasons for the drop were not discussed in the paper, scientists have known for decades that certain environmental factors, like exposures to pesticides (such as atrazine, alachlor and diazinon) and other endocrine-disrupting chemicals, like phthalates and polychlorinated biphenyls, or PCBs, can have impacts on reproductive health.

Nearly 20 years ago, for example, Swan and other researchers published an analysis of research into links between pesticide exposure and sperm quality, and found that 79% of studies indicated a decrease in sperm quality among those exposed to the chemicals.

Diet, activity level and stress may also play a role.

Swan and Levine said exposures to chemicals in the environment and other factors likely all play a substantial role in the sperm count trend.

And, the risk factors are related; for example, obesity is a risk factor for lower-quality sperm, but certain endocrine-disrupting chemicals — which interfere with how hormones work — are thought to contribute to obesity, as well.

Diet is hard to decouple from chemical exposures, too, since pesticide residues linger on much of the food we eat.

Additionally, both Swan and Levine said climate change could be a factor, both due to climate-related stress and actual fluctuations in temperature, since heat waves are linked to decreases in sperm quality.

Prenatal exposure may be a contributor, too. Chemical exposures during the male "programming window," when reproductive traits are formed in utero, have an outsized effect on sperm quality later in life, said Swan.

For example, she said, when a man smokes — a known endocrine-disrupting activity — he lowers his sperm count by about 20%.

When a male is born to a woman who smokes, his sperm count is reduced by about 50%. Those effects may last for generations before subsequent children and grandchildren return to normal sperm counts.

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Protecting reproductive health

Levine is optimistic that scientists and policymakers can reverse the trend if they can determine the causes.

Swan pointed to the sharp drop in cigarette smoking in the past 50 years as evidence that widespread lifestyle changes are possible, and said that any large-scale adoption of healthier habits, like better diets and more physical activity, can help improve reproductive health.

Making individual lifestyle changes like choosing organic, pesticide-free produce and staying away from certain plastics and chemical products can help lower a person's exposure to endocrine-disrupting chemicals, too.

However, doing so can be difficult, especially for disadvantaged populations with less access to fresh foods, higher environmental exposures and fewer means to purchase safer, non-toxic household goods.

To truly tackle the problem, though, much more research is needed, said Swan.

One thing she'd like to see would be better tracking of sperm count, similar to how the Centers for Disease Control and Prevention tracks obesity.

Levine also said better surveillance tools will be crucial to understanding the problem more deeply.

Once humankind "defines a problem and puts our resources and mind into it, we find solutions that we could not have thought about when we started," said Levine. "It's always theoretically reversible."

Originally published by Environmental Health News.

Grace van Deelen is a fellow at Inside Climate News. She has also written for EHN and MIT Biology. She holds a Master's degree in science writing from MIT and degrees in biology and anthropology from Tufts University.

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Jeanice · 18 days ago
Wow - all that verbiage and not a word about RADIATION from wireless devices and cell towers? Not a peep either about the fact that ultrasound stops sperm production and our babies are being blasted with ultrasonic radiation multiple times while they are in the womb? How can anyone write an article about plummeting sperm counts without a mention of the most serious problem that is causing it?
25 ∧ | ∨ · Reply · Share ›

Pat Ormsby → Jeanice · 18 days ago
It's the invisible elephant in the room. I think the censorship of this topic is even more severe than that of the vaccines. We have an organization here in Japan that advocates for the rights of electrohypersensitives and multiple-chemical sensitives https://www.ehs-mcs-jp.com/ I recently ran a quick Google search with the organization's name (Life-Environmental Network) and came up with nothing, but the same search on Yandex brought it up at the top of the list. The director has always tried to get along with the system as it is, and has recommended the victims "shelter in place," (i.e., fix up a safe space in their home, because there is really no place in Japan to flee). She does not allow public comments on her site, and takes a quiet cautious approach--which is what you do in Japan. She was recently forced to flee her home when the noise from construction of a campground next to her house became too much for her on top of all the other environmental assaults.
Anyway, any mention at all of negative effects from EMFs is likely to bring out the censors.
12 ∧ | ∨ · Reply · Share ›

MultiChubby1 → Pat Ormsby · 18 days ago
But I thought that was why we are here. To read the censored truth. Maybe not.
2 ∧ | ∨ · Reply · Share ›

John → MultiChubby1 · 13 days ago
https://www.safesleevecases...

This article explains a lot. Notice that Tom Wheeler is now the head of the FCC, appointed by Obama. Follow the money. The article at EHN and here doesn't mention wireless tech, because the research being discussed never went near it. The researchers didn't dare; not if they wanted to keep tenure and continue to get research grants.
∧ | ∨ · Reply · Share ›

Phyllis → Jeanice · 18 days ago
Thank You, Janice! Totally forgot to mention the radiation from all Our electronic devices, cell phones/towers, x-rays, ultrasounds, etc. These are BIGGIES!?!?
11 ∧ | ∨ · Reply · Share ›

David Goldberg → Jeanice · 18 days ago
CHD - which does fantastic work - should know better and they leave this incredibly toxic environmental factor out way too often. EMFs from wireless radiation are a powerful - perhaps the most powerful - environmental element contributing to reproductive decline. This is not voodoo science. These are peer reviewed scientific studies showing clear evidence of reduced sperm count and infertility. You can do better on this one CHD.
7 ∧ | ∨ · Reply · Share ›

Peggy Nieto → David Goldberg · 17 days ago
Agree. CHD loses a bit of credibility with me when it continues to refer to climate change in these articles and referring to the jab as a vaccine. Both have been proven false.
9 ∧ | ∨ 1 · Reply · Share ›

Jan Geerling → Peggy Nieto · 13 days ago
Fully agree.
2 ∧ | ∨ · Reply · Share ›

Polly Green → Jeanice · 13 days ago
Men/boys shouldn't carry cell phones in their pants pockets or wear tight pants.
1 ∧ | ∨ · Reply · Share ›

Jan Geerling → Jeanice · 13 days ago
For once: climate change as a cause for plummeting sperm count seems to be a inserted argument by some activist.
1 ∧ | ∨ · Reply · Share ›

moneekwa → Jan Geerling · 12 days ago
How in the heck would "climate change" even BE a factor for fertility? We are talking on the order of a degree or so up or down. We get far greater temp variations seasonally and it makes no sense to even mention climate change affecting fertility. Why they are inserting mention of it I can't credit. It isn't settled science at all, anyway, and comes off as woke buy-in.

EMFs on the other hand, would have been important to mention. Go figure.
∧ | ∨ · Reply · Share ›

ME MCC → Jeanice · 18 days ago
Exactly! This HAS to change!! Then there is whatever they are spraying in the environment And GMO crops. They are killing us out.
1 ∧ | ∨ · Reply · Share ›

suzanne romero → Jeanice · 18 days ago
My thoughts are right there with you Jeanise
1 ∧ | ∨ · Reply · Share ›

Glenn Lego · 18 days ago
"Sperm counts lower. " Isn't that what the globalists want? Just asking.
21 ∧ | ∨ · Reply · Share ›

MultiChubby1 → Glenn Lego · 18 days ago
Yes.
3 ∧ | ∨ · Reply · Share ›

Glenn Lego → MultiChubby1 · 17 days ago
After all "you'll own nothing and you will be happy." Sarcasm off
3 ∧ | ∨ · Reply · Share ›

Michael · 18 days ago
No discussion of vaccine effects. Hmm.
The purpose of the vaccines is depopulation.
Fortunately, I'm not vaccinated.
19 ∧ | ∨ · Reply · Share ›

johnny mars → Michael · 17 days ago
Fresh, unvaxxxxed sperm for sale here.
2 ∧ | ∨ · Reply · Share ›

Jeremy Forrest → Michael · 18 days ago
Sow those oats!!
1 ∧ | ∨ · Reply · Share ›

David A · 18 days ago
A good article, except for the habitual link to "climate change ". There has been ZERO global increase in heat waves. Most of the very limited warming has occurred at night - the low is a bit higher. Decades ago Many hot environments had a population with perfectly normal spermatozoa count.
15 ∧ | ∨ · Reply · Share ›

Brian → David A · 15 days ago
Those night time lows are only "higher" because the climatology network was reconfigured to place temperature stations at a lower average latitude and on top of runways and parking lots which give off stored heat all night until dewpoint. It's an example of deliberately poor methodology. They avoid isolating urban heat.
3 ∧ | ∨ · Reply · Share ›

Jan Geerling → David A · 13 days ago
Completely agree. The only way that the supposed climate change might be responsable for plummeting sperm counts is that it may have produced a completely deviated generation of abject and ignorant adolescents who seem to be victims of rapidly deteriorating education.
2 ∧ | ∨ · Reply · Share ›

Beatrice · 18 days ago
Too many estrogens in our environment. We've all see the advertisements for ' Low T' but the truth is that it's HIGH E as in Estrogen. The two hormones are not to be measured independent of each other but instead as a ratio like the way doctors are supposed to measure cholesterol levels (many doctors don't). I hope this won't offend any males reading this but I can remember when most men had to shave twice a day (morning and evening) because they would develop the 5 O'clock Shadow. Today, most men do not resemble the males I grew up with like my father that were extremely masculine in build and had more body and facial hair and even a deeper voice. I also know that girls are starting their menses much earlier than when I was a teen and this is not a healthy trend as it puts women at risk of certain cancers. I've heard of ten year old girls getting breast cancer. We are mostly androgynous humans.
15 ∧ | ∨ · Reply · Share ›

Polly Green → Beatrice · 13 days ago
The metabolites of the BC Pill do not breakdown. They're returned to the water supply.
Also Bill Gates bought a patent from a failing San Diego biotech firm in the early 1990s. They'd developed a GM corn but it had an unfortunate side effect of lowering mammalian sperm counts. Gates immediately put it into production at Monsanto and now over 98% of corn on the planet will decrease sperm counts.
Corn is in absolutely everything. How many kids eat Doritos and taco shells every week? CAFO meat? Even the "styrofoam" is actually CORN.
Don't eat or use corn products.
2 ∧ | ∨ · Reply · Share ›

MARY GABRIELE · 18 days ago
What about the so-called "vax"? Are they looking at that?
15 ∧ | ∨ · Reply · Share ›

EMS · 18 days ago
Wow, when in doubt blame "climate change"!
14 ∧ | ∨ · Reply · Share ›

Jan Woods → EMS · 18 days ago
Yeah, I was going to repost but will not because of the ridiculous climate change angle being brought in.
12 ∧ | ∨ · Reply · Share ›

BURYWEYMIER48 → Jan Woods · 18 days ago
Totally agree with you. .. I am guessing it has to do with all of the contraception in the water (hard to filter out), vaccines, and I would say the chemicals, smoking and probably a host of other things. . . like the chem trails we keep seeing in the sky. . . . and whatever else they are doing to us to kill us off and prevent reproducing.
4 ∧ | ∨ · Reply · Share ›

Phyllis → EMS · 18 days ago
I know, I was going to say pretty much the same thing. climate change is a hoax and referring to it as the cause/reason for this, that or the other really makes me cringe?! ugh 😜
That sperm counts have been on the decline for so long now leads me to think that it's the overuse of pesticides, endocrine disrupters like BPA, BPS, and others, plastics, gmo's and other fake foods, over use of antibiotics and other pharma drugs, alcohol and tobacco, and now, the gmo kill shots. nwo is going for depopulating the planet so they can have it all to themselves, and they're doing it any which way they can, for however long they can. Time to put a stop to it all, I'd say.
8 ∧ | ∨ · Reply · Share ›

Jan Geerling → Phyllis · 13 days ago
So people pay a price for all the comfort and pleasures of life?
∧ | ∨ · Reply · Share ›

David A → EMS · 18 days ago
Yep, see my comment above.
1 ∧ | ∨ · Reply · Share ›

Lloyd Hart · 18 days ago
Being un-vaccinated now has benefits. I'm going to get rich selling my sperm.
10 ∧ | ∨ · Reply · Share ›

pilgrimusa → Lloyd Hart · 18 days ago
Not if you eat anything grown with GMOs and "protected" by RoundUp and forever chemicals (i.e Monsanto's signature).
5 ∧ | ∨ · Reply · Share ›

MultiChubby1 → pilgrimusa · 18 days ago
That too.
∧ | ∨ · Reply · Share ›

Jeremy Forrest → Lloyd Hart · 18 days ago
Sssh, they might just nab you in a van and harvest everything.
2 ∧ | ∨ · Reply · Share ›

HongryHawg → Lloyd Hart · 18 days ago
And your blood.
2 ∧ | ∨ · Reply · Share ›

MultiChubby1 → Lloyd Hart · 18 days ago
Only if you're cute.
∧ | ∨ · Reply · Share ›

Pittypat · 18 days ago · edited
No proof has been shown, that the climate is changing any more so than in the past. "Models" can be constructed for anything that one wants to say. Look at the inaccuracy of the modeling in 2019. We need actual proof that can be reproduced, prior to anyone making these type of statements.
8 ∧ | ∨ · Reply · Share ›

CAWS · 18 days ago
Betting the Covid jab has been even more effective in lowering both male & female fertility. After all the globalist's goal is to reduce the population.
8 ∧ | ∨ · Reply · Share ›

NonyaBusiness · 18 days ago
Climate change? Really?! Give me a fr&*&ing break!!
7 ∧ | ∨ · Reply · Share ›

Dawn Rasmussen · 18 days ago
I wonder if what they are spraying in the Chem Trails is partly to blame. Didn't they start spraying in the 70's?
6 ∧ | ∨ · Reply · Share ›

BikeIce · 17 days ago
Not mentioned is that undoubtedly testosterone levels are dropping in parallel to sperm counts. The CV19 VAX is accelerating the loss of both and will lead to higher levels are heart attacks, strokes, muscle wasting, Type II diabetes, dementia and osteoporosis as all of these are prevented by testosterone. Of course, the trend towards whimpier, wussified men will continue and the gummit will more easily control as their 'nads functions fade away....exactly what the elite want.
4 ∧ | ∨ · Reply · Share ›

A. Crawford · 17 days ago
Bought and sold, whoever is responsible for this article. Climate change? Not radiation from WiFi, etc., etc.? Seriously? If they studied history, they'd know that climate has been changing, sometimes dramatically, throughout time. We're still here. Gotta be something else going on.
4 ∧ | ∨ · Reply · Share ›

LinUK · 17 days ago
The massive push to replace natural foods with seed oil and soya started around the beginning of the 1970s.
No doubt the jab is making the situation much worse now.
4 ∧ | ∨ · Reply · Share ›

Jan Geerling → LinUK · 13 days ago
The Covid jab probably had a trigger effect on fertility in general.
∧ | ∨ · Reply · Share ›

Ronald Martono · 18 days ago
Again, no need to talk about the obvious at the "Defender of the Narrative", instead we're to be programmed with climate change....
4 ∧ | ∨ · Reply · Share ›

unholyone · 17 days ago
You lost all credibility with "climate change" as a cause.
3 ∧ | ∨ · Reply · Share ›

BUC SeaBee · 17 days ago
Climate FRAUD . . . Tony Heller, who actually developed software that tracks Climate FRAUD and totally blows the Climate Change data out of the water as propaganda with this video.

Use this video whenever a Climate Change activist might open their mouth with Climate Change BS . . .

3 ∧ | ∨ · Reply · Share ›

BH387 · 18 days ago
As the elephants named Vax and EMF stomp around the room unnoticed. And now with Vax having spawned their latest bastard child, mRNA, whose fast growth and size turned out even enormous by elephant standards.

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